

under glass. The vine as known here is a composite product, representing the sum of the selection that has taken place during the course of the ages. But the selection has always been within the limits of one species, and for one particular purpose. As the vine is grown for its fruit, we might naturally expect the greatest amount of variation to be manifested in the berries. Systematists tell us that in such cases we should for comparative and historical purposes attach more weight to characters afforded by organs which have not been subjected to man's interference, than to those which are the result of intentional selection. This sounds plausibly, but in practice any one who studies the leaves of the vine will probably find in the foliage which has not been intentionally selected, as great, or even a larger, amount of variation than he will in the fruit.

In the case of the American vines the circumstances are different. There are twenty or thirty native species and a large number of varieties which have been classified by the author of this treatise. By the commingling of a few of these there have been produced within the comparatively short time that has been at the disposal of American cultivators, no fewer than eight hundred "domestic" varieties.

Of these varieties some are found specially suitable to one locality, or to one set of circumstances, whilst others adapt themselves to a different environment. It may seem to some mere ingenious trifling to concern oneself with all these morphologically petty variations. The naturalist knows better, the evolutionist finds himself placed in possession of an armoury of facts; whilst, to give only one illustration, the severely practical man is rendered happy by finding himself endowed with varieties which are relatively uninjured by Phylloxera, and on which, therefore, the European varieties may be engrafted. If a great plague has not been entirely stayed, at least its consequences have been evaded by this practical application of a variation in constitutional endowment.

On all grounds then, scientific, taxonomic or economic, the study of these variations assumes such great importance that naturalists have cause to be grateful to Prof. Bailey for the suggestive book that he has put at their disposal.

The principal aim of the book may be divined from our previous remarks. It is only necessary to add that the fruits treated of are the grape, the mulberry, the plums and cherries, the native apples, the raspberry, blackberry, and sundry other fruits. The history and evolution of these are sketched in a very instructive and interesting fashion. One thing comes out strongly, and that is that the amelioration of fruits in the United States is better secured by experiment with American species, than with those of European origin. The "environment" is more propitious to the native than to the introduced species.

This fact may, however, be set against others; such as the extraordinary vigour which some species are known to manifest when transferred to a new country, enabling them even to oust the aborigines! Again, in the old countries it is generally more immediately advantageous to improve what we have, than to break entirely new ground. In the one case we have everything to work up, in the other we begin with the advantages conferred by long years of inheritance. In this connection we are of

course speaking from the point of view of the practical cultivator always clamouring for immediate results. If time is not of the essence of the matter, and only the sure but slow advance of science is concerned, then it would probably eventually be more fruitful to endeavour to turn to account the opportunities offered to us by the tens of thousands of plants which surround us, with only a few scores of which, at present, we avail ourselves.

Whatever be their needs or their predilections, naturalists will find Prof. Bailey's book a most valuable addition to their book-shelves.

LEGENDS OF THE NORTH AMERICAN INDIANS.

Creation Myths of Primitive America in relation to the Religious History and Mental Development of Mankind. By Jeremiah Curtin. Pp. xxxix + 532. (London: Williams and Norgate, 1899.)

THIS book is to a great extent a product of journalistic enterprise. In 1895 Mr. Curtin made an arrangement with the editor of a newspaper, by which he was to travel among some of the Indian tribes of North America and collect myth-tales; the most interesting of those that he might come across he was to send to the paper for publication at regular intervals. Mr. Curtin carried out his agreement. He travelled in California, Mexico and Guatemala, and the twenty-two myth-tales or stories here collected have all previously been published in the newspaper from which he obtained his commission. Science is, perhaps, better served when she is not written to order; but there can be no doubt that Mr. Curtin has collected a number of traditions that will be of great interest to students of the beliefs of savage and undeveloped races.

The myths published in the volume are some of those still current among the Wintus and Yanas, two stocks of Indians whose numbers have suffered considerable diminution during recent years. The Wintus formerly occupied the part of California on the right bank of the Sacramento from Mount Shasta to the northern shore of San Francisco Bay. Half a century ago they may have numbered some 10,000; to-day not more than 500 of them survive. The Yanas have suffered still more severely. Before the year 1864 they probably numbered some 3000; but in that year, in consequence of the murder of some white men in their district, the tribe was practically exterminated by the mining population of northern California; not more than fifty escaped. It is not improbable that before the advance of civilisation these tribes will soon cease to exist. Mr. Curtin has, therefore, done well in rescuing what still remains of their traditional system of belief before it disappears altogether.

The Indians have no very definite theory of creation, and their conceptions on this subject, which really affect their daily life to a considerable extent, can only be gathered from the long rambling stories, passed down with little change through many generations. The stories told by the Wintus and the Yanas resemble many others to be found among the various Indian tribes of North America, and those here published may perhaps, be conveniently, though rather roughly, classified

as "creation-myths." They do not give any systematised account of the origin of the universe, but in the form of tales describe the changes and metamorphoses by which the present world arose from a very similar one already in existence. According to this theory of creation there were people already in existence before the present race of men (that is of Indians) inhabited the earth. These first people were very numerous, and lived happily in a golden age through untold periods of time; they were in a sense divinities. At length disorder was introduced, and from the conflicts that resulted the present world arose. The creation-myths recount the methods by which this older world was changed into the world now existing. The changes were generally effected by struggle between hostile personages, one hero, perhaps, overcoming many opponents, and changing each into some beast, bird, plant or insect, the resultant beast or thing always corresponding in some power or quality with the personage from which it had been changed. Such conceptions are not peculiar to Wintu and Yana belief, but run through the traditions of most Indian tribes. We do not, however, agree with Mr. Curtin in thinking that similar traditions lie at the back of all the mythologies of the ancient world.

There is one slight defect in the general plan of the book that calls for notice, though it is, perhaps, due to the rather unusual circumstances which attended its birth. On opening the volume, a glance at the type and paper would suggest that the book was a novel or a collection of short stories; and, though a writer may make use of what type he likes so long as it is legible, in this instance Mr. Curtin's selection serves to indicate the spirit in which he has approached his work. He has, in fact, attempted to treat these legends from a literary rather than from a scientific standpoint, and it cannot be said that the result is altogether satisfactory. As might be expected, these stories, judged on their own merits as stories, are entirely lacking in interest, and their only value consists in the new material they offer to the student of folk-lore and comparative religion. Mr. Curtin, however, does not seem to be writing for such a reader. It is true that at the end some notes are added, but they omit a great deal of information necessary to any scientific collection of this class. For instance, no details are given as to the sources from which Mr. Curtin obtained the legends that he prints. We should like to know whether they were composed in their present form by Mr. Curtin himself from materials supplied at different times by several members of a tribe; or whether they are translations of actual stories told to him, and taken down by him at the time. We cannot help thinking that if full information on such points had been added, the scientific value of the book would have been considerably increased.

OUR BOOK SHELF.

An Illustrated School Geography. By Andrew J. Herbertson, F.R.S.E., F.R.G.S. Pp. vii + 263. (London: Edward Arnold, 1898.)

It would be difficult to produce a more elaborately and attractively illustrated volume of geography than that which Mr. Herbertson has constructed upon the basis of

Mr. Frye's "Complete Geography," published in the United States three years ago. Every one of the quarto pages contains a pleasing collection of pictures, many of them striking and all of them instructive, and at the end of the volume are sixteen pages of coloured physical and political maps. The volume is thus a text-book, a picture-book, and an atlas combined; and for teachers who consider that books constituted in this way should be used in teaching geography, no better volume is available.

The work might be called a picture-book of geography; for the illustrations take up nearly as much room as the text. The pictures will show the young students who open the book what a large number of interesting people, places and things there are in the world, and will thus create a desire to read the text to learn something about the subjects illustrated. Let a pupil get the idea that geography consists mainly of definitions and statistics, and you will have a difficulty in ever making him believe that there is anything interesting in the study of the earth. But by introducing him to the subject through such an attractive means as Mr. Herbertson's volume affords, attention is at once secured.

The plan of the volume is as follows: After an introduction comes a section dealing with general geography, and including the principles of physical geography; biogeography, or the distribution of plants and animals; and the geography of mankind. In the second part, the special geography of the various countries of the earth is dealt with, beginning with the British Isles. It is intended that after the different aspects of geography referred to have been studied in a general way, the special geography of particular countries shall be considered, so that the principles taught by the first part shall be applied to the parts of the world studied in the second part. Teachers who think that principles should be deduced by pupils from facts will be able to begin at once with the special geography, and will introduce the generalisations where required. Whichever method is adopted, a truly educational course will be obtained; for the knowledge gained will show that many every-day phenomena of nature belong to geography, and carry instruction with them.

Notes on Cage Birds (Second series); or, *Practical Hints on the Management of British and Foreign Cage Birds, Hybrids, and Canaries.* Edited by W. T. Greene. Pp. xii + 340. (London: L. Upcott Gill, 1898.)

IN spite of all that has been and will be said and written against it, the practice of keeping birds in confinement is so popular and so wide-spread, that there is no chance of its coming to an end. This being so, it is all-important that everything possible to alleviate the tedium of their confinement, and to preserve them in the best health, should be done for the captives. And as this is one of the objects of the little book before us, it may be commended to all bird-fanciers. Still, it is rather sad to read that "once a bird has lived in a cage or aviary for a time it is unfitted for a life of freedom, and usually quickly dies if permitted to fly away."

The book consists of a series of extracts from *The Bazaar*, written by various bird-fanciers since 1882, which have been classified and arranged by Dr. Greene; whose known experience affords sufficient guarantee for the selection. To an outsider, it is almost marvellous to note the number of species apparently ill-suited for captivity which have been made to thrive, and frequently even to breed, in this condition. And it is also satisfactory to learn that it is one of the objects of the "fancy" to endeavour to protect our native birds; especially species, like the starling, which are undoubtedly beneficial.

The appearance of the book is sadly marred by the introduction of hideous advertisements on the back of the title-page, &c.; but in other respects it is well and attractively got-up.

R. L.